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THE SOPHISTICATED PILOT: A NEW LINE OF DEFENSE IN THE FIELD OF GENERAL AVIATION

WILL S. SKINNER*

THE CALIFORNIA Supreme Court adopted the sophisticated user defense in *Johnson v. American Standard, Inc.*¹ The crux of the sophisticated user defense is that “[a] manufacturer is not liable to a sophisticated user of its product for failure to warn of a risk, harm, or danger, if the sophisticated user *knew* or *should have known* of that risk, harm, or danger.”² Knowledge of the risk is measured at the time of injury, rather than the date the product was manufactured—“[t]he timeline focuses on the general population of sophisticated users and conforms to the defense’s purpose to eliminate any duty to warn when the expected user population is generally aware of the risk at issue.”³ This defense is applicable to negligence and strict liability causes of action.⁴ The *Johnson* decision has potentially far-reaching impact in many cases, including those involving the field of general aviation.⁵ For example, general aviation manufacturers

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¹ 179 P.3d 905 (Cal. 2008).

² *Id.* at 914 (emphasis added).

³ *Id.* at 916.

⁴ *Id.* at 911.

⁵ California joins the following jurisdictions which have adopted or in some form acknowledged the sophisticated user defense: Arizona, Delaware, Idaho, Indiana, Iowa, Kansas, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Montana, Nevada, New Jersey, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Virginia, Washington and Wisconsin. See *Bergfeld v. Unimin Corp.*, 319 F.3d 350 (8th Cir. 2003); *Swope v. Columbian Chems. Co.*, 281 F.3d 185 (5th Cir. 2002); *Adkins v. GAF Corp.*, 923 F.2d 1225 (6th Cir. 1991); *Willis v. Raymark Indus., Inc.*, 905 F.2d 793 (4th Cir. 1990); *Jacobson v. Colo. Fuel & Iron Corp.*, 409 F.2d 1263 (9th Cir. 1969); *Forest v. E.I. DuPont de Nemours & Co.*, 791 F. Supp. 1460 (D. Nev. 1992); *Mason v. Texaco, Inc.*, 741 F.

sued by injured pilots, or their estates, for injuries resulting from an aviation accident or mishap should be able to successfully argue, in many situations, that any negligence and strict product liability causes of action by the pilot or the pilot's estate are barred based on the sophisticated user doctrine adopted in *Johnson*.

I. JOHNSON V. AMERICAN STANDARD

In *Johnson*, Plaintiff was a trained and certified heating, ventilation, and air conditioning ("HVAC") technician.⁶ He began working in the HVAC field in 1996 and continued until 2002.⁷ Plaintiff had received his universal certification, the highest certification an HVAC technician can obtain from the Environmental Protection Agency ("EPA").⁸ The universal certification allows the certified technician "to work on, and purchase, refrigerant for large commercial air conditioning systems."⁹

"Universally" certified technicians are trained professionals, and their tasks include brazing (welding) and part replacement.

Large air conditioning systems commonly use R-22, a hydrochlorofluorocarbon refrigerant. The refrigerant can decompose into phosgene gas when exposed to flame or high heat, as could happen while a technician is brazing air conditioner pipes containing residual refrigerant. Exposure to phosgene gas may cause numerous health problems, and manufacturers and

Supp. 1472 (D. Kan. 1990); *Dole Food Co. v. N.C. Foam Indus. Inc.*, 935 P.2d 876 (Ariz. Ct. App. 1996); *In re Asbestos Litig.* (Mergenthaler), 542 A.2d 1205 (Del. Super. Ct. 1986); *Sliman v. Aluminum Co. of Am.*, 731 P.2d 1267 (Idaho 1986); *Natural Gas Odorizing, Inc. v. Downs*, 685 N.E.2d 155 (Ind. Ct. App. 1997); *Kennedy v. Mobay Corp.*, 579 A.2d 1191 (Md. Ct. Spec. App. 1990), *aff'd*, 601 A.2d 123 (Md. 1992); *Hoffman v. Houghton Chem. Corp.*, 751 N.E.2d 848 (Mass. 2001); *Portelli v. I.R. Constr. Prods. Co.*, 554 N.W.2d 591 (Mich. Ct. App. 1996); *Gray v. Badger Mining Corp.*, 676 N.W.2d 268 (Minn. 2004); *Swan v. I.P., Inc.*, 613 So. 2d 846 (Miss. 1993); *McGarvey v. G.I. Joe Septic Serv., Inc.*, 679 A.2d 733 (N.J. Super. Ct. App. Div. 1996); *Phillips v. A.P. Green Refractories Co.*, 630 A.2d 874 (Pa. Super. Ct. 1993), *aff'd sub nom. Phillips v. A-Best Prods. Co.*, 665 A.2d 1167 (Pa. 1995); *Bragg v. Hi-Ranger, Inc.*, 462 S.E.2d 321 (S.C. Ct. App. 1995); *Whitehead v. Dychow Co.*, 775 S.W.2d 593 (Tenn. 1989); *Humble Sand & Gravel, Inc. v. Gomez*, 146 S.W.3d 170 (Tex. 2004); *House v. Armour of Am., Inc.*, 886 P.2d 542 (Utah Ct. App. 1994), *aff'd*, 929 P.2d 340 (Utah 1996); *Reed v. Pennwalt Corp.*, 591 P.2d 478 (Wash. Ct. App. 1979); *Haase v. Badger Mining Corp.*, 669 N.W.2d 737 (Wis. Ct. App. 2003).

⁶ *Johnson*, 179 P.3d at 908.

⁷ *Id.*

⁸ *Id.*

⁹ *Id.*

HVAC technicians have generally known of the dangers this exposure [to phosgene gas] could cause since as early as 1931.¹⁰

Plaintiff sued “various chemical manufacturers, chemical suppliers, and manufacturers of air conditioning equipment, including defendant American Standard, Inc.”¹¹ Plaintiff alleged that in 2002 “he brazed refrigerant lines on an evaporator defendant manufactured in 1965 that contained R-22 refrigerant, creating and exposing him to phosgene gas. Plaintiff alleged that the maintenance and repairs he performed . . . exposed him to phosgene gas, causing him to develop pulmonary fibrosis.”¹²

Plaintiff alleged causes of action against Defendant based on its alleged failure to warn of the potential hazards of R-22 exposure, including negligence, strict liability failure to warn, strict liability design defect, and breach of implied warranties.¹³ Plaintiff’s theory in each cause of action was that Defendant “knew that servicing the evaporator would create harmful phosgene gas, but [D]efendant failed to provide [P]laintiff with adequate warning.”¹⁴

Defendant moved for summary judgment on the grounds that (1) it had no duty to warn because it did not manufacture the refrigerant, and (2) “it had no duty to warn about the risks of R-22 exposure because it could assume that the group of trained professionals to which [P]laintiff belonged, and [P]laintiff himself, were aware of those risks.”¹⁵ The trial court granted summary judgment on both grounds.¹⁶ In affirming the trial court’s decision on the sole ground that the sophisticated user defense applies in California, the Court of Appeal held that “a manufacturer cannot be liable to a sophisticated user of its product for

¹⁰ *Id.* (The dangers and risks associated with R-22 are noted on Material Safety Data Sheets (“MSDSs”). The purpose of MSDSs is to inform those who may come into contact with potentially hazardous chemicals about their dangers. Employers are required to use the MSDS to train and educate their employees about the chemicals and dangers to which they may be exposed on the job. Among other things, employers are required to tell employees where they can find the MSDSs, how to read them, how to detect the presence of dangerous materials, and how to protect against possible health hazards from those materials.) (citations omitted).

¹¹ *Id.*

¹² *Id.* at 908–09.

¹³ *Id.* at 909.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

failure to warn of a risk, if a sophisticated user should reasonably know of that risk.”¹⁷ Since Plaintiff’s theory “was the same in all causes of action, *i.e.*, product liability through the failure to warn, the sophisticated user defense applied” to Plaintiff’s entire complaint.¹⁸

The Court of Appeal observed that “the undisputed facts were that under federal law, HVAC technicians who work on commercial equipment must be certified by the EPA with ‘universal’ certification, which is granted after an exam. They are ‘trained professionals.’ Most HVAC technicians also have some kind of trade or professional training.”¹⁹ The court further concluded that there was “undisputed evidence that HVAC technicians could reasonably be expected to know of the hazard of brazing refrigerant lines.”²⁰

II. THE SOPHISTICATED USER DEFENSE

“The sophisticated user defense exempts manufacturers from their typical obligation to provide product users with warnings about the products’ potential hazards. The defense is . . . an exception to the manufacturer’s general duty to warn consumers, and . . . acts as an affirmative defense to negate the manufacturer’s duty to warn.”²¹ The rationale of the defense is that the failure to provide warnings about risks already known to a sophisticated user usually is not a proximate cause of harm resulting from those risks because the user’s knowledge of dangers is the equivalent of prior notice.²² The relevant inquiry for the

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.* at 910.

²² *Id.* at 910–11; *see Crook v. Kaneb Pipe Line Operating P’ship*, 231 F.3d 1098, 1102 (8th Cir. 2000) (This defense is “no more than an expression of common sense as to why a party should not be liable when no warnings or inadequate warnings are given to one who already knows or could reasonably have been expected to know” of a product’s dangers.); *see generally* Jeffrey W. Kemp & Lindsay Nicole Alleman, *The Bulk Supplier, Sophisticated User, and Learned Intermediary Doctrines Since the Adoption of the Restatement (Third) of Torts*, 26 REV. LITIG. 927, 941 (2007); Kenneth M. Willner, Note, *Failures to Warn and the Sophisticated User Defense*, 74 VA. L. REV. 579, 587–88 (1988); Christopher P. Downs, Comment, *Duty to Warn and the Sophisticated User Defense In Products Liability Cases*, 15 U. BALT. L. REV. 276, 285 (1986).

sophisticated user defense turns on the end user's level of sophistication.²³

The inquiry in practice focuses on whether the plaintiff "knew or should have known," of the particular risk of harm from the product giving rise to the injury.²⁴ A manufacturer is not liable to a sophisticated user even if it fails "to warn of a risk, harm, or danger, if the sophisticated user knew, or should have known, of that risk, harm, or danger."²⁵ Actual knowledge is not required because, in most instances, it would be nearly impossible for a manufacturer to prove actual knowledge of a specific user or member of the sophisticated group.²⁶ In *Johnson*, the California Supreme Court provided the following example:

Users may have misread their training manuals, failed to study the information in those manuals, or simply forgotten what they were taught. However, individuals who represent that they are trained or are members of a sophisticated group of users are saying to the world that they possess the level of knowledge and skill associated with that class. If they do not actually possess that knowledge and skill, that fact should not give rise to liability on the part of the manufacturer.²⁷

²³ *Hoffman v. Houghton Chem. Corp.*, 751 N.E.2d 848, 854 (Mass. 2001) ("[T]he sophisticated user defense protects a supplier from liability for failure to warn when the end user knows or reasonably should know of a product's dangers."); *Bigness v. Powell Elecs., Inc.*, 619 N.Y.S.2d 905, 906 (App. Div. 1994) ("Plaintiff was injured while testing an electrical 'cabinet.' He alleged that defendants should have warned of the dangers of using a connector plug that was part of the cabinet. Defendant Powell Electronics, the assembler of the connector plug, and defendant Amphenol Corp., Bendix Connector Operations, the manufacturer of the connector plug, moved for summary judgment dismissing the complaint, asserting that there was no duty to warn because plaintiff was a knowledgeable user of the connector plug. . . . The [trial] court properly granted defendants' motions for summary judgment. There is 'no necessity to warn a customer already aware-through common knowledge or learning-of a specific hazard' and, in the proper case, the court can decide as a matter of law that there is no duty to warn or that the duty has been discharged. Plaintiff, an electronics technician, was a 'knowledgeable user' of the connector plug, and thus there was no duty to warn.") (citations omitted).

²⁴ *Johnson*, 179 P.3d at 914; see *Mozeke v. Int'l Paper Co.*, 933 F.2d 1293, 1297-98 (5th Cir. 1991); *Duncan v. La. Power & Light Co.*, 532 So. 2d 968, 971-72 (La. Ct. App. 1988); *In re Kelvin Manbodh Asbestos Litig. Series*, 47 V.I. 215, 247 (2005); 63A AM. JUR. 2D *Products Liability* § 1163 (2008) (The sophisticated user defense applies in situations where the ultimate user actually possessed "special knowledge, sophistication, or expertise in relation to the product.").

²⁵ *Johnson*, 179 P.3d at 914.

²⁶ *Id.*

²⁷ *Id.*

The defense applies equally to strict liability and negligence causes of action because “the sophisticated user’s knowledge eliminates the manufacturer’s need for a warning.”²⁸ There is no logical reason why the defense should not be equally available against strict liability and negligence causes of action because “[t]he focus of the defense . . . is whether the danger in question was so generally known within the trade or profession that a manufacturer should not have been expected to provide a warning specific to the group to which plaintiff belonged.”²⁹

“[T]he sophisticated user’s knowledge of the risk is measured from the time of the plaintiff’s injury, [not] from the date the product was manufactured.”³⁰ It is immaterial that the actual injured plaintiff should have but did not know of the risk.³¹ The focus is on whether the general population of sophisticated users was generally aware of the risk at issue at the time of the injury.³²

III. THE FAA-CERTIFIED PILOT

The Federal Aviation Administration (“FAA”) has the authority to promulgate and enforce air safety standards and regulations.³³ The FAA’s responsibilities include certification of recreational, private, commercial and air transport pilots.³⁴ The FAA “shall issue an airman certificate to an individual when the Administrator finds, after investigation, that the individual is qualified for, and physically able to perform the duties related to, the position to be authorized by the certificate.”³⁵ Furthermore, the FAA is also charged with making sure that once certified, pilots operate aircraft in a safe manner to not only ensure their safety but the safety of passengers and the public at large.³⁶ To accomplish this duty and carry out its responsibility, the FAA has established extensive regulations governing pilot certification³⁷ and aircraft operations.³⁸

²⁸ *Id.* at 915.

²⁹ *Id.*

³⁰ *Id.* at 916.

³¹ *Id.*

³² *Id.*

³³ *Montalvo v. Spirit Airlines*, 508 F.3d 464, 468 (9th Cir. 2007); *Abdullah v. Am. Airlines, Inc.*, 181 F.3d 363, 368 (3d Cir. 1999).

³⁴ 49 U.S.C. § 44703(a) (2000).

³⁵ *Id.*

³⁶ *Montalvo*, 508 F.3d at 472.

³⁷ 14 C.F.R. § 61 (2008). There are various types of pilot certifications, including Recreational Pilots (14 C.F.R. §§ 61.96–101), Private Pilots (14 C.F.R.

The requirements necessary for a private pilot certificate and rating are set forth in detail in 14 C.F.R. §§ 61.102 through 61.117.³⁹ To obtain a private pilot certificate, a prospective pilot must pass a required knowledge test, satisfy certain aeronautical experience requirements, and pass a practical test.⁴⁰ Significant aeronautical knowledge,⁴¹ flight proficiency,⁴² and aeronautical

§§ 61.102–117), Commercial Pilots (14 C.F.R. §§ 61.121–134), and Airline Transport Pilots (14 C.F.R. §§ 61.151–161).

³⁸ 14 C.F.R. § 91 (2008).

³⁹ This discussion will focus only on the requirements for private pilot certification.

⁴⁰ 14 C.F.R. § 61.103 (The detailed requirements include: “(a) Be at least 17 years of age for a rating in other than a glider or balloon. (b) Be at least 16 years of age for a rating in a glider or balloon. (c) Be able to read, speak, write, and understand the English language. If the applicant is unable to meet one of these requirements due to medical reasons, then the Administrator may place such operating limitations on that applicant’s pilot certificate as are necessary for the safe operation of the aircraft. (d) Receive a logbook endorsement from an authorized instructor who: (1) Conducted the training or reviewed the person’s home study on the aeronautical knowledge areas listed in § 61.105(b) of this part that apply to the aircraft rating sought; and (2) Certified that the person is prepared for the required knowledge test. (e) Pass the required knowledge test on the aeronautical knowledge areas listed in § 61.105(b) of this part. (f) Receive flight training and a logbook endorsement from an authorized instructor who: (1) Conducted the training in the areas of operation listed in § 61.107(b) of this part that apply to the aircraft rating sought; and (2) Certified that the person is prepared for the required practical test. (g) Meet the aeronautical experience requirements of this part that apply to the aircraft rating sought before applying for the practical test. (h) Pass a practical test on the areas of operation listed in § 61.107(b) of this part that apply to the aircraft rating sought. (i) Comply with the appropriate sections of this part that apply to the aircraft category and class rating sought.”).

⁴¹ *Id.* § 61.105(b) (Required aeronautical knowledge areas include: “(1) Applicable Federal Aviation Regulations of this chapter that relate to private pilot privileges, limitations, and flight operations; (2) Accident reporting requirements of the National Transportation Safety Board; (3) Use of the applicable portions of the ‘Aeronautical Information Manual’ and FAA advisory circulars; (4) Use of aeronautical charts for VFR navigation using pilotage, dead reckoning, and navigation systems; (5) Radio communication procedures; (6) Recognition of critical weather situations from the ground and in flight, windshear avoidance, and the procurement and use of aeronautical weather reports and forecasts; (7) Safe and efficient operation of aircraft, including collision avoidance, and recognition and avoidance of wake turbulence; (8) Effects of density altitude on takeoff and climb performance; (9) Weight and balance computations; (10) Principles of aerodynamics, powerplants, and aircraft systems; (11) Stall awareness, spin entry, spins, and spin recovery techniques for the airplane and glider category ratings; (12) Aeronautical decision making and judgment; and (13) Preflight action that includes—(i) How to obtain information on runway lengths at airports of intended use, data on takeoff and landing distances, weather reports and forecasts, and

experience⁴³ is required prior to private pilot certification from the FAA.⁴⁴ For example, the prospective private pilot must receive and log ground training from an authorized instructor, or complete a home-study course on the required aeronautical knowledge areas that apply to the aircraft category and class rating sought.⁴⁵ In addition, he or she must receive and log ground and flight training from an authorized instructor on the

fuel requirements; and (ii) How to plan for alternatives if the planned flight cannot be completed or delays are encountered.”).

⁴² *Id.* § 61.107(b) (Required training in areas of operation for an airplane category rating with a single-engine class rating include: “(i) Preflight preparation; (ii) Preflight procedures; (iii) Airport and seaplane base operations; (iv) Takeoffs, landings, and go-arounds; (v) Performance maneuvers; (vi) Ground reference maneuvers; (vii) Navigation; (viii) Slow flight and stalls; (ix) Basic instrument maneuvers; (x) Emergency operations; (xi) Night operations, except as provided in § 61.110 of this part; and (xii) Postflight procedures.” There is specific required training for other category and class ratings [*e.g.*, airplane category rating with a multi-engine class rating, rotorcraft category rating with a helicopter class rating, rotorcraft category rating with a gyroplane class rating, powered-lift category rating, glider category rating, lighter-than-air category rating with an airship class rating, lighter-than-air category rating with a balloon class rating, powered parachute category rating, and a weight-shift-control aircraft category rating]).

⁴³ *Id.* § 61.109(a) (For an airplane single-engine rating, the ten hours of solo flight training must include at least the following: “(1) 3 hours of cross-country flight training in a single-engine airplane; (2) Except as provided in § 61.110 of this part, 3 hours of night flight training in a single-engine airplane that includes—(i) One cross-country flight of over 100 nautical miles total distance; and (ii) 10 takeoffs and 10 landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport; (3) 3 hours of flight training in a single-engine airplane on the control and maneuvering of an airplane solely by reference to instruments, including straight and level flight, constant air-speed climbs and descents, turns to a heading, recovery from unusual flight attitudes, radio communications, and the use of navigation systems/facilities and radar services appropriate to instrument flight; (4) 3 hours of flight training in preparation for the practical test in a single-engine airplane, which must have been performed within 60 days preceding the date of the test; and (5) 10 hours of solo flight time in a single-engine airplane, consisting of at least—(i) 5 hours of solo cross-country time; (ii) One solo cross-country flight of at least 150 nautical miles total distance, with full-stop landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 50 nautical miles between the takeoff and landing locations; and (iii) Three takeoffs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.” The specific solo flight training varies for other ratings [*e.g.*, airplane multi-engine, helicopter, gyroplane, glider, airship, balloon, powered parachute, and weight-shift-control aircraft]).

⁴⁴ See, *e.g.*, Daniel E. Wanat, *Certification Procedures—Aircraft and Pilot—The Roles of the Federal Aviation Administration and The National Transportation Safety Board*, 20 DEPAUL L. REV. 729, 740–45 (1971).

⁴⁵ 14 C.F.R. § 61.107(a).

areas of flight proficiency that apply.⁴⁶ Finally, a prospective pilot seeking “a private pilot certificate with an airplane category and single-engine class rating must log at least 40 hours of flight time that includes at least 20 hours of flight training from an authorized instructor and 10 hours of solo flight training in the [FAA-specified] areas of operation listed.”⁴⁷

The extensive requirements necessary for private pilot certification serve a gate-keeping function to ensure that an FAA-certified private pilot has the requisite knowledge, understanding, skill, and sophistication to safely operate an aircraft. However, the FAA does not simply release the pilot from the hangar, if you will, upon issuing a pilot certification. The FAA demands that the pilot be ever vigilant and continue to increase his or her knowledge, understanding, and skill with regard to the operation of aircraft. Once certified for flight, the pilot’s task is not over, but rather, just begins. The duties, obligations, and requirements imposed on an FAA-certified pilot are on-going each and every time he or she decides to operate an aircraft.

The pilot-in-command of an aircraft is “responsible for determining whether that aircraft is in condition for safe flight.”⁴⁸ The FAA has charged that “[e]ach pilot in command shall, before beginning a flight, become familiar with *all available information concerning that flight*.”⁴⁹ The pilot has a general duty to operate the aircraft in a safe manner and a duty of reasonable care, both to passengers and to other aircraft.⁵⁰ The pilot must comply with all operational limitations of the aircraft detailed in

⁴⁶ *Id.*

⁴⁷ *Id.* § 61.109(a).

⁴⁸ *Id.* § 91.7.

⁴⁹ *Id.* § 91.103 (emphasis added) (This information must include “(a) For a flight under IFR or a flight not in the vicinity of an airport, weather reports and forecasts, fuel requirements, alternatives available if the planned flight cannot be completed, and any known traffic delays of which the pilot in command has been advised by ATC; (b) For any flight, runway lengths at airports of intended use, and the following takeoff and landing distance information: (1) For civil aircraft for which an approved Airplane or Rotorcraft Flight Manual containing takeoff and landing distance data is required, the takeoff and landing distance data contained therein; and (2) For civil aircraft other than those specified in paragraph (b)(1) of this section, other reliable information appropriate to the aircraft, relating to aircraft performance under expected values of airport elevation and runway slope, aircraft gross weight, and wind and temperature.”).

⁵⁰ See, e.g., *id.* §§ 91.13, 91.103, 91.107, 91.111–91.123. See David T. Norton, A Lawyer-Flight Instructor’s Prognostications on the Implementation of Free Flight: How Will the Large-Scale Introduction of GPS Into General Aviation Cockpits Affect the Liabilities That Face Pilots and the Flight Instructors Who Train Them?, 62 J. AIR L. & COM. 725, 750 (1997).

the flight manual.⁵¹ The FAA requires, *inter alia*, the pilot in command to become familiar with “weather conditions, airport conditions, alternative airfields, aircraft condition, the nature of the terrain over which he or she will be flying, and any pertinent information contained in the latest Airman’s Information Manual, Advisory Circulars, and Notices to Airmen.”⁵² The pilot has a duty, *inter alia*, “to see and avoid other air traffic when possible,” “to not proceed into a known hazard, such as adverse weather,” and to operate the aircraft at appropriate speeds and altitudes.⁵³

IV. THE SOPHISTICATED PILOT DEFENSE

Under the sophisticated user defense, “[a] manufacturer is not liable to a sophisticated user of its product for failure to warn of a risk, harm, or danger, if the sophisticated user *knew* or *should have known* of that risk, harm, or danger.”⁵⁴ An FAA-certified pilot fits the profile of a “sophisticated user” much more so than the HVAC technician in *Johnson*. The court in *Johnson* explained that, under federal law, HVAC technicians are required to be certified by the EPA with “universal” certification, and

⁵¹ 14 C.F.R. § 91.9. See, e.g., *Kay v. Cessna Aircraft Co.*, 548 F.2d 1370, 1373 (9th Cir. 1977) (“Cessna provided detailed instructions regarding safety checks to be made before and during take-off. The Owner’s Manual sets forth procedures the pilot should follow before take-off which include checks of the throttle settings and the magnetos. The instructions further provide that the pilot should check full-throttle engine operation early in the take-off run. Compliance with these procedures would have alerted the pilot in this case to the rear engine failure and the accompanying danger. . . . [F]ailure to follow safe operating procedures was not reasonably foreseeable to the manufacturer. Regardless of whether [the pilot] made pre-flight checks of the plane before taxiing from the parking lot, it is clear from the record that the plane sat on the runway for several minutes before take-off and after the rear engine failed. Both the Skymaster manual and basic principles of aircraft safety dictate that the pilot be alert at that time for potential problems. The evidence does not indicate that one could reasonably find that a pilot would fail to check his instrument panel during that period. It is unreasonable to expect Cessna to have anticipated such misuse.”) (footnote omitted); *Stevens v. Cessna Aircraft Co.*, 170 Cal. Rptr. 925, 926 (Ct. App. 1981) (“It is the pilot who has control of the airplane and the responsibility under federal regulations to determine aircraft weight prior to takeoff. The owner’s manual for this type of aircraft contained the necessary information for use by the pilot.”) (*citing* *Newing v. Cheatham*, 540 P.2d 33, 41 (Cal. 1975) (pilot’s ultimate responsibility for all decisions concerning the aircraft’s operation was established by an applicable federal air regulation)).

⁵² Norton, *supra* note 50, at 750.

⁵³ *Id.*

⁵⁴ *Johnson v. Am. Standard, Inc.*, 179 P.3d 905, 914 (Cal. 2008) (emphasis added).

such certification is only granted after the prospective technician successfully passes an exam.⁵⁵ HVAC technicians are “trained professionals” and most have some kind of trade or professional training.⁵⁶ HVAC technicians are considered to be sophisticated users.⁵⁷ HVAC technicians as a group should and, in fact are required to, know the potential risks associated with and present in their field.

As detailed above, pilots are required to be certified by the FAA. However, the requirements for FAA pilot certification are not limited to passing an exam (as is the case for HVAC technicians). Merely passing a written knowledge test will not suffice. Before the FAA issues a private pilot certification, the prospective pilot must have specific aeronautical experience and pass a practical “hands-on flight” test.⁵⁸ Furthermore, once certified, a pilot has an affirmative duty, and is required, to become familiar with *all available information concerning the flight* that the pilot is about to embark upon.⁵⁹ Pilots are, without question, “held to a higher standard of knowledge than that of a layman unfamiliar with” the operation of an aircraft and not certified by the FAA.⁶⁰

There is no question that there have been, and will continue to be, FAA-certified pilots who do not maintain the requisite knowledge, understanding, skill, and sophistication to safely operate an aircraft. These pilots fail to comply with the FAA requirements and regulations that pilots vigilantly follow to increase their knowledge, understanding, and skill with regard to the safe operation of aircraft. Furthermore, some pilots do not heed their affirmative duty to become familiar with all available information concerning the flight and operation of the aircraft. The majority of general aviation accidents are caused by such pilots.⁶¹ However, an individual pilot’s error due to lack of knowledge or commitment to satisfying his or her affirmative burden does not negate the sophisticated pilot defense. This was made clear in *Johnson*.

⁵⁵ *Id.* at 908.

⁵⁶ *Id.* at 909.

⁵⁷ *Id.* at 916–17.

⁵⁸ 14 C.F.R. § 61.107(a) (2008).

⁵⁹ *Id.* § 91.103.

⁶⁰ James E. Link, II, *Placards, Warning Labels & Operation Manuals: An Aircraft Manufacturer’s Duty To Warn*, 55 J. AIR L. & COM. 265, 284 (1989); see *Kay v. Cessna Aircraft Co.*, 548 F.2d 1370, 1372–74 (9th Cir. 1977); *Stevens v. Cessna Aircraft Co.*, 170 Cal. Rptr. 925, 926–27 (Ct. App. 1981).

⁶¹ Darby Becher, *The General Aviation Revitalization Act: An Unqualified Success*, 16 AIR & SPACE LAW. 9 (2002).

The evidence in *Johnson* established that HVAC technicians could reasonably be expected to know of the hazard of brazing refrigerant lines.⁶² Plaintiff's individual lack of knowledge was irrelevant. Plaintiff's claim that although he had read the MSDS for R-22, he did not understand that he should avoid heating R-22 was without merit.⁶³ The EPA *required* HVAC professionals "to understand the decomposition products of refrigerants at high temperatures."⁶⁴ The study guide informed HVAC technicians that R-22 can form dangerous substances when in contact with high heat, and the MSDS for R-22 informed technicians that the product can decompose and release toxic gases when in contact with heat.⁶⁵ Plaintiff's excuse that he had never heard of phosgene gas was immaterial.⁶⁶ The court held that the evidence was clear that HVAC technicians knew or should have known of the dangers of R-22 heat exposure.⁶⁷

The individual pilot's knowledge, understanding, and skill in a particular situation is not the question when it comes to the sophisticated user defense. Based on *Johnson*, courts must focus on the knowledge, understanding, and skill required of FAA-certified pilots as a group or sub-group (*e.g.*, recreational, private, commercial, or air transport) and the general risks and hazards known to pilots arising from operating aircraft.⁶⁸ If pilots are

⁶² *Johnson*, 179 P.3d at 917 ("Plaintiff's expert testified that HVAC technicians knew or should have known of the risk of phosgene at the time defendant manufactured the product in 1965. Defendant's expert testified that throughout his 28 years as an HVAC technician, it was 'widely known among HVAC technicians' that when R-22 is heated it can decompose into toxic by-products that include phosgene.").

⁶³ *Id.* at 909.

⁶⁴ *Id.*

⁶⁵ *Id.* at 909–10.

⁶⁶ *Id.* at 909.

⁶⁷ *Id.*

⁶⁸ See generally *First Nat'l Bank & Trust Corp. v. Am. Eurocopter Corp.*, 378 F.3d 682 (7th Cir. 2004). In *First National Bank & Trust Corp.*, the court held that "information about blade flap was readily available to the . . . pilots in their training and in materials familiar to them as professional pilots (like safety manuals and government regulations), any lack of direct warning by [the manufacturer] to the pilots is inconsequential." *Id.* at 692 (*citing* *Phelps v. Sherwood Med. Indus.*, 836 F.2d 296, 304 (7th Cir. 1987) ("manufacturer has no duty to warn sophisticated intermediary 'of those dangers which he already knew'"); *Smock Materials Handling Co. v. Kerr*, 719 N.E.2d 396, 403 (Ind. Ct. App. 1999) ("Actual or constructive knowledge may arise where . . . information of the product's dangers is available in the public domain.")). The court provided examples of information readily available to the pilots that included, *inter alia*, a 1983 FAA circular, state occupational safety regulations and federal regulations, The Safety

required to have certain knowledge, understanding, and skill and should have been aware of the particular risk that caused the accident and the plaintiff pilot's injuries or death, then the sophisticated pilot defense should apply. Defendants should argue that any claims arising from the pilot's injury or death are barred if they result from the individual pilot's failure to react in a particular situation, or the individual pilot's failure to exercise the skill that FAA-certified pilots as a group or sub-group know, or should know.⁶⁹

Based on the sophisticated user defense, when defendants in general aviation actions are sued by pilots, pilots' estates or pilots' heirs, the defendants should assert as an affirmative defense the "sophisticated user" or, perhaps more aptly named, the "sophisticated pilot defense." In appropriate situations, defendants could seek summary judgment on the ground that, based on *Johnson* and the sophisticated user defense, any negligence and strict product liability causes of action are barred.

Manual of the Helicopter Association International, and a 1992 training book entitled *Learning to Fly Helicopters*. *Id.* at 692-93.

⁶⁹ The analysis set forth herein with respect to an FAA-certified pilot is equally applicable to an FAA-certified repair station. The FAA has extensive, specific, and stringent requirements necessary for an FAA repair station certification as set forth in detail in 14 C.F.R. §§ 145.1 through 145.223. These regulations govern all aspects of an FAA-certified repair station: the application process; housing, facilities, equipment, materials, and data; personnel; and operating rules. FAA-certified repair stations are sophisticated users. In general aviation product liability cases where maintenance of the aircraft is at issue, the sophisticated user or "sophisticated repair station" defense may be applicable. The most likely scenario where the sophisticated repair station defense would come into play would be where the repair station points the finger at the general aviation manufacturer based on the manufacturer's failure to warn of a particular issue with its product. In these situations, based on *Johnson*, the focus should be on what FAA-certified repair stations are reasonably expected to know regarding the risks and hazards pertaining to maintenance of aircraft.



Comments

